REMARKS

This response is submitted in response to a Final Office Action mailed on October 17, 2007. Claims 12-15, 21-25, and 30-34 are withdrawn from consideration. Claims 1-3, 5-11, 16-20, 26-29, and 35-43 were pending at the time the Office Action was issued. Claim 17 is now canceled and claim 44 is newly added. Applicants hereby amend claims 1, 5, 7-8, 16, 18-19, 26, 28, 35, and 41. Claims 1-3, 5-11, 16, 18-20, 26-29, and 35-44 remain pending.

In the interest of reducing the issues to be considered in this response, the following remarks focus principally on the patentability of independent claims 1, 16, 26, 36, and 41. The patentability of each of the dependent claims is not necessarily separately addressed in detail. However, Applicants' decision not to discuss the differences between the cited art and each dependent claim should not be considered as an admission that Applicants concur with the conclusions set forth in the Office Action that these dependent claims are not patentable over the disclosure in the cited references. Similarly, Applicants' decision not to discuss differences between the prior art and every claim element, or every comment set forth in the Office Action, should not be considered as an admission that Applicants concur with the interpretation and assertions presented in the Office Action regarding those claims. Indeed, Applicants believe that all of the dependent claims patentably distinguish over the references cited. Moreover, a specific traverse of the rejection of each dependent claim is not required, since dependent claims are patentable for at least the same reasons as the independent claims from which the dependent claims ultimately depend.

I. EXAMINER INTERVIEW

Applicants respectfully express their appreciation to Examiner Gelagay for the telephone interview held on November 6, 2007, during which the Examiner discussed the disposition of this case with the undersigned attorney. Specifically, the Examiner and the undersigned attorney discussed the rejections of claims 8-9 and 28 under 35 U.S.C. §112, second paragraph. The undersigned attorney clarified to Examiner Gelagay that claims 1, 8, and 9 present four possible alternative scenarios with respect to the matching of the signatures and accessibility status. Accordingly, it is believed that agreement was reached with Examiner Gelagay that the claim 8 and 28, as amended in this Response, and claim 9, as previously presented, overcome the 35 U.S.C. §112 rejections.

Further, the Examiner and the undersigned attorney also discussed the claims that have been identified as allowable in the Office action.

II. ALLOWABLE SUBJECT MATTER

The Office Action states that claims 5 and 16, as well as claims 6-7, 18-19 and 43 depending therefrom, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any other intervening claims. During the telephone interview held on November 6, 2007, Examiner Gelagay clarified that claim 17, instead of claim 16, would be allowable if rewritten in independent form including all the limitations of the base claim and any other intervening claims.

III. REJECTION UNDER 35 U.S.C. § 112

Claims 8-9 are rejected under 35 U.S.C. §112, Second Paragraph, as being indefinite. Applicants have amended claim 8 to recite "preventing the requested resource from execution" instead of "executing the requested resource." Further, as discussed above, Applicants have clarified that claim 9 further limits claim 1 as it presents an alternative scenario under which the requested resource may be prevented from execution.

Claims 17 and 28 are rejected as lacking sufficient antecedent basis. Applicants have canceled claim 17. Additionally, it is believed that the amendment of claim 28 to recite "hash the sorted and stringed function names" instead of "hash the stringed function names" provides sufficient antecedent basis to overcome the 35 U.S.C. §112 rejection. Therefore, Applicants respectfully request reconsideration and withdrawal of these rejections.

IV. REJECTIONS UNDER 35 U.S.C. § 103

Claims 1-3, 8-11, 16, 20, 26-28, and 35-42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,188,885 to Garst et al. (hereinafter "Garst") in view of U.S. Patent 6,629,154 to Jones et al. (hereinafter "Jones") and U.S. Patent 6,026,235 to Shaughnessy et al. (hereinafter "Shaghnessy"). Respectfully, Applicants submit that the claims are allowable over the cited references for at least the reasons explained in detail below.

Claims 1-3 and 8-11

Claims 2-3 and 8-11 depend from Claim 1. Claim 1 recites:

1.   A method for managing access to resources, comprising:

> generating a list of resource signatures, each of the resource signatures being generated based at least on a plurality of function names included in an import table of a corresponding resource;
>
> accessing the list of resource signatures, each of the resource signatures configured with an accessibility status, wherein the accessibility status includes one of loadable and restricted;
>
> generating a verification signature for a requested resource, the verification signature being generated based at least on a plurality of function names included in an import table of the requested resource;
>
> comparing the verification signature for the requested resource to the list of resource signatures;
>
> executing the requested resource if the resource signature matches the verification signature and the accessibility status is loadable; and
>
> preventing the requested resource from execution if the resource signature matches the verification signature and the accessibility status is restricted.

Applicants respectfully assert that Garst does not teach or suggest every aspect of claim 1. First, as noted by the Examiner, Garst does not teach or suggest, "generating a list of resource signatures, each of the resource signatures being generated based at least on *a plurality of function names* included in an import table of a corresponding resource," as recited in claim 1.   (Emphasis added). (Office Action, Pages 4-5, Paragraph 3, Lines 12-14).

Moreover, the deficiency of Garst with respect to this element of claim 1 is not remedied by Jones. Instead, Jones discloses creating a hash value by "applying a hash function to the method string name and the parameter type list." (Column 5, Lines 39-41). Even assume, *in arugendo,* that a "method string name" is equivalent to a "function name", Jones nevertheless discloses the creation of a signature by applying a hash to a *single* "method string name" and "a parameter

type list," rather than creating a signature based on "*a plurality* of function names." (Emphasis added).

Further support for the fact that Jones' signature creation process is based on a *single* "method string name" and a "parameter type list" is found in the following disclosure of Jones (Column 9, Lines 28-31):

> "In one implementation, hash value 308 is a hash value resulting from applying a standard hash function to the combination of the method name and parameter type list 318 of the remote method 316, as follows:
>
> *Hash (Method Name, Parameter Type List)*." (Emphasis Added).

Moreover, "Parameter Type List" is not equivalent to a function. As further disclosed by Jones, "Parameter Type List" denotes a type for an argument. Specifically, Jones disclosed that a user would enter "John" as an argument for a parameter "String" in *Hash (lookupPhone, String)* to lookup the phone number for a person with the string name "John". (Column 10, Lines 44-54).

Accordingly, Jones also fails teach or suggest "generating a list of resource signatures, each of the resource signatures being generated based at least on *a plurality of function names* included in an import table of a corresponding resource," as recited in claim 1. (Emphasis added). Additionally, the disclosures of Shaughnessy are related to import tables. However, Shaughnessy is silent with respect to the generation of signatures from function names. Thus, Shaughnessy also does not remedy the deficiency of Garst with respect to this element of claim 1.

Second, for the same reasons, the cited references also do not teach or suggest, "the verification signature being generated based at least on *a plurality of*

function names included in an import table of the requested resource." (Emphasis added).

Thus, for at least the above reasons, the cited references (Garst, Shaughnessy, and Jones), whether individually or in combination, do not disclose, teach, or fairly suggest the method recited in claim 1. Since claims 2-5 depend from claim 1, they are allowable over the cited references at least due to their dependency, as well as due to additional limitations recited.

Specifically, claim 3 is further allowable over the cited references. Claim 3 recites:

> 3.   A method according to Claim 1, wherein each of the resource signature is generated based further on one or more dynamic link library (DLL) names, and wherein the verification signature is generated based further on one or more dynamic link library (DLL) names.

As noted by the Examiner, Garst discloses that a digital signature may be created for enforcing a software license of a "software resource" that includes a dynamic link library. (Column 5, 1-65; Office Action, Page 5, Paragraph 3, Lines 1-4). However, the use of a digital signature to *protect* a software resource that includes a dynamic link library, as disclosed by Garst, does not teach the *generation* of digital signatures based on the *name* of the dynamic link library.

Accordingly, Garst does not teach or suggest, "each of the resource signature is *generated based* further on one or more *dynamic link library (DLL) names*," and "the verification signature is *generated based* further on one or more *dynamic link library (DLL) names*," as recited in claim 5. (Emphasis added).

Moreover, the deficiencies of Garst are not remedied by Shaughnessy and Jones. Jones and Shaughnessy are each silent with respect to the generation of a resource signature based on dynamic link library names. Thus, for at least the above reasons, claim 3 is further allowable over the cited references to Garst, Shaughnessy, and Jones.

Claims 16 and 20

Claim 20 depends from claim 16. Claim 16, as amended, recites:

> 16. A method of restricting particular applications, comprising:
> receiving a list of application fingerprints corresponding respectively to restricted applications;
> receiving a request to execute an application;
> generating a confirmation fingerprint for the requested application, wherein generating the fingerprint includes:
>> *retrieving a plurality of names from an import table, wherein the plurality of names include function names;*
>> *sorting the retrieved names;*
>> *concatenating the sorted names in a predetermined manner; and*
>> *hashing the concatenated names;*
> comparing the confirmation fingerprint to the list of application fingerprints; and
> restricting the requested application if the confirmation fingerprint matches one of the application fingerprints respectively corresponding to restricted applications. (Emphasis added).

Applicants respectfully assert that the cited references (Garst, Shaughnessy, and Jones), whether individually or in combination, do not disclose, teach or fairly suggest every aspect of claim 1.

As stated in the Office Action (and clarified by the Examiner during the telephone interview), claim 17 "would be allowable if rewritten in independent

form including all of the limitations of the base claim and any intervening claims."

Accordingly, without further comment or prejudice as to the merits of the Examiner's rejection, Applicants hereby incorporate the emphasized limitation of claim 16, as recited above, from claim 17 into claim 16. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection to claim 16.

Therefore, since claim 20 depends from claim 16, it is allowable over the cited references at least due to its dependency on an allowable base claim.

Claims 26-28

Claims 27-28 depend from Claim 26. Claim 26, as amended, recites:

> 26. An apparatus, comprising:
> an interface to receive a request for a running state of an application;
> an application identifier to generate an application digital signature for the application based at least on a plurality *of function names* included in an import table of the application;
> an application manager to match the application digital signature against a list of stored digital signatures indicating whether corresponding applications are eligible or ineligible for a running state; and
> an enabler to enable the running state for the application if the application digital signature is not matched to a stored digital signature indicating that the application is ineligible. (Emphasis added).

Applicants respectfully assert that the cited references do not teach or suggest every aspect of claim 26. Specifically, Applicants incorporate the reasoning presented above in response to the rejection of claim 1 under 35 U.S.C. §103(a). Accordingly, Applicants respectfully assert that the cited references (Garst, Shaughnessy, and Jones) do not disclose, teach or fairly suggest, whether individually or in combination, "an application identifier to generate an

application digital signature for the application based at least on a plurality *of function names* included in an import table of the application." (Emphasis added).

Moreover, since claims 27-28 depend from claim 26, they are allowable over the cited references at least due to their dependency on an allowable base claim.

Claims 35-40

Claims 36-40 depend from claim 35. Claim 35, as amended, recites:

> 35. A computer-accessible storage medium having an application programming interface (API), the API having one or more instructions to cause one or more processors to:
> receive a request to run a program;
> generate a digital signature for the program *based at least on a plurality of function names* included in an import table of the program;
> compare the generated digital signature against a compilation of digital signatures corresponding to restricted programs; and
> enable only those programs for which the signature does not match with any of the compiled signatures. (Emphasis added).

Applicants respectfully assert that the cited references do not teach or suggest every aspect of claim 35. Specifically, Applicants incorporate the reasoning presented above in response to the rejection of claim 1 under 35 U.S.C. §103(a). Accordingly, Applicants first respectfully assert that the cited references (Garst, Shaughnessy, and Jones) do not disclose, teach or fairly suggest, whether individually or in combination, "generate a digital signature for the program based at least on a plurality *of function names* included in an import table of the program." (Emphasis added).

Moreover, since claims 36-40 depend from claim35, they are allowable over the cited references at least due to their dependency on an allowable base claim.

Claims 41-42

Claims 41, as amended, recites:

> 41. A license enforcement method, comprising:
> generating a digital signature for each of a plurality of applications *based at least on a plurality of function names* included in an import table of each application;
> classifying each of the digital signatures in accordance with a licensing status for the corresponding applications;
> coding an operating system to:
> include the classified digital signatures,
> generate a digital signature for a requested application *based at least on a plurality of function names* included in an import table of the requested application,
> compare the digital signature for the requested application to the classified digital signatures, and
> run the requested application when the digital signature for the requested application does not map to digital signature classified as not being licensed. (Emphasis added).

Applicants respectfully assert that the cited references not teach or suggest every aspect of claim 41. Specifically, Applicants incorporate the reasoning presented above in response to the rejection of claim 1 under 35 U.S.C. §103(a). Accordingly, Applicants first respectfully assert that the cited references (Garst, Shaughnessy, and Jones) do not disclose, teach or fairly suggest, whether individually or in combination, "generating a digital signature for each of a plurality of applications based at least on a plurality *of function names* included in an import table of each application," and "generate a digital signature for a

requested application *based at least on a plurality of function names* included in an import table of the requested application." (Emphasis added).

Moreover, since claim 42 depends from claim 41, it is allowable over the cited reference at least due to its dependency on an allowable base claim.

Claim 29

Claim 29 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Garst in view of Jones, Shaughnessy, and U.S. Patent 5,892,904 to Atkinson et al. (hereinafter "Atkinson"). Respectfully, Applicants submit that Claim 29 is allowable over the cited references for at least the reasons explained in detail below.

Claim 29 depends from claim 26. Claim 26 has been amended to include the recitation of, "an application identifier to generate an application digital signature for the application based at least on a plurality *of function names* included in an import table of the application." (Emphasis added). Therefore, Applicants rely on similar reasoning as presented above regarding claim 1 and respectfully assert that the cited references (Garst, Shaughnessy, and Jones), whether individually or in combination, do not disclose, teach or fairly suggest this element of claim 26.

Moreover, the deficiencies of Garst are also not remedied by Atkinson. Atkinson's disclosures are related to an MD5 hash algorithm. (Column 20, Lines 1-10). However, Atkinson is silent with respect to the generation of signatures from function names. Accordingly, claim 26 is allowable over the cited references.

Moreover, since claim 29 depends from claim 26, it is allowable over the cited references at least due to its dependency on an allowable base claim.
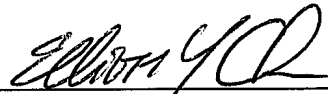
V.   NEW CLAIM

Claim 44 is newly added. Claim 44 depends from and applies additional limitations to claim 40. Accordingly, claim 40 is allowable at least due to its dependency on an allowable base claim.

CONCLUSION

Applicants respectfully submit that claims 1-3, 5-11, 16, 18-20, 26-29, and 35-44 are in condition for allowance. Applicants respectfully request entry of the amendments, as well as consideration and prompt allowance of the claims. If any issue remains unresolved that would prevent allowance of this case, the Examiner is requested to contact the undersigned attorney to resolve the issue.

Respectfully Submitted,

Dated: _12-17-07_   By: _____

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